1970

A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION



22_{ND ANNUAL} HONOR AWARDS PROGRAM



U.S. DEPARTMENT OF COMMERCE

22 ND ANNUAL HONOR AWARDS PROGRAM

PROGRAM

October 21, 1970/3:00 P.M. DEPARTMENT OF COMMERCE AUDITORIUM

Fourteenth Street between E Street and Constitution Avenue, N.W. Washington, D. C.

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GOLD MEDAL AWARD WINNERS



Martin L. Marimont

Chief, National Economics Division Office of Business Economics

Mr. Marimont is being honored for supervising the construction of a new input-output table. This table is a major contribution to our knowledge of the working of the American economy; to economic planning by business and other private groups; and to the formulation of Government policies directed at balanced economic growth. Input-output tables show how the industries of the Nation interact in producing the GNP and provide a unique framework for tracing the interconnections between detailed industry developments and overall economic performance. The distinguishing feature of Mr. Marimont's table is that it shows the output of the Nation in a 368 industry-group detail; the earlier table showed only 86 groups. The construction of an input-output table entails the processing of masses of raw data by complex statistical techniques, and depends on the cooperation of many workers.



Joseph F. Arbena

Supervisory Survey Statistician Bureau of the Census Jeffersonville, Indiana

Mr. Arbena has been responsible for the improvement and expansion of the Jeffersonville Census Operations Division's capability to handle special Bureau projects which are processed there. This has included the exceptionally difficult task of preparing for the 19th Decennial Census. Mr. Arbena has demonstrated a capacity for leadership, devotion to duty and superior technical competence, all of which have contributed to his outstanding achievements in a broad spectrum of activities. He has brought about outstanding improvements in the Jeffersonville office by the application of managerial and technical skills in coordinating the work of others and motivating them to a common goal. He has been cited several times for his superior accomplishments in the Equal Employment Program and enjoys excellent relations with the union.



Paul C. Glick

Assistant Chief, Demographic and Social Statistics Programs Bureau of the Census

During the past 25 years Dr. Glick has made exceptional contributions to statistics on marriage and the family. He is widely recognized as a leading expert in this field. His technical accomplishments include the development of a modern classification system for family statistics, the initiation and development of projections of households and families, the incorporation of key statistics on the family into the standard content of nearly all decennial census publications, the production of authoritative and widely cited reports on marriage and the family, and the development of annual statistical reports on marriage and the family. These are highly regarded by people responsible for the development of programs in welfare, labor, marketing, and many other fields, including scholarly research.



Jefferson D. McPike

Chief, Field Division Bureau of the Census

As Chief of the Field Division Mr. McPike has demonstrated outstanding leadership and skill in the successful administration and development of the field operations connected with Bureau surveys, censuses, and particularly the 1970 Decennial Census, For the 1970 Census Mr. McPike has been responsible for approximately 185,-000 temporary employees, the development of new techniques and procedures, and the necessary preparation of operational manuals and training materials. In addition he implemented and participated in a "community education" program designed to educate the public, particularly in the large urban centers, to produce a favorable climate for the conduct of the 1970 Census. He faced a challenge unique in Bureau history-the direction of a decennial census conducted under mail-out, mail-back procedures in sixty percent of the nation.



Anthony A. Berlinsky

Chief, Engineering Research Branch Bureau of the Census

McRae Anderson

Chief, Engineering Development Laboratory Bureau of the Census

Mr. Berlinsky and Mr. Anderson are recognized for their work in designing and developing equipment required for processing data from the 1970 Censuses of Population and Housing. The award acknowledges the ingenuity and originality displayed by these men in equipment concept and design and their outstanding leadership and direction of the equipment development programs which they have headed with great dedication and success over the past five years.



Robert W. Newland*

Deputy Director Office of Business Services Bureau of Domestic Commerce

As Assistant Director and Deputy Director of the Office of Business Services, Mr. Robert W. Newland during the past ten years provided outstanding leadership and imagination in the development and administration of the programs of the Office of Business Services which have contributed significantly to Department of Commerce objectives. His accomplishments include the establishment of a system for measuring the activities and results of the 42 Field Offices which increased their productivity by almost forty percent. He was also responsible for making certain changes in the Government procurement information published in the Commerce Business Daily which received the acclaim of the Senate Select Committee on Small Business and made this publication of much greater value to its subscribers.

* Given in recognition of contributions while in the Department.



Robert E. Simpson

Director, Office of International

Commercial Relations

Bureau of International Commerce

Mr. Simpson has made valuable contributions to programs that have strengthened the international economic position of the United States, promoted United States business policies and growth, and expanded the dimension of mutually beneficial cooperation between the United States Government and the business community. These contributions have arisen from twenty-three years of Departmental service which has involved distinguished performance in special assignments of great importance to the Government and valued counselling on critical problems the nation has faced in the field of international economics, as well as continuing duties as a director of key Commerce programs. Program direction has resulted in high accomplishments in the planning and coordination of Department trade promotion abroad and significant advances in working relationships with the Foreign Service of the overseas business objectives of the United States.



Barbara J. Boardman

Public Information Officer Maritime Administration

Miss Boardman's competent direction of the information and public relations programs of the Maritime Administration has been a major factor contributing to the Maritime Administration's fulfillment of its mission. Her highly distinguished authorship brought nationwide recognition to both Maritime and the Department. Her outstanding performance, dedication to duty and constant attitude of helpfulness have continually brought credit to the agency, the Department and the U.S. Government. Her phenomenal knowledge of the numerous complexities of the maritime industry in specific and the transportation industry in general has made her an acknowledged expert in these fields and a constantly sought after advisor to agency and department officials as well as officials of other government agencies, members of Congressional staffs and executives of the maritime industry.



Roy G. Bowman

Supervisory General Attorney Maritime Administration

Starting in the spring of 1969, Mr. Bowman played an essential role in developing a merchant marine program for the 70's and personally drafted and edited the program document presented to the White House. He negotiated with many of the representatives of the departments concerned to reconcile diverse interests and to achieve concensus within the Administration. His considerable forensic talents, legal skills and analytical abilities helped maintain the Program's integrity. Mr. Bowman formulated the legislative package to implement the program, gained general agreement of all interested parties and supervised the necessary technical sessions to perfect the language. He developed many of the complex mechanisms for managing wage subsidies and tax deferred reserve funds, two of the new Program's most fundamental elements.



Randall G. Kriner

Chief, Office of Ship Operations Maritime Administration

Captain Kriner, by virtue of his broad marine experience in the operation of commercial and government ships, has successfully directed and contributed in a major degree to the effective reactivation and operation of the National Defense Reserve Fleet ships to meet vital Southeast Asia Sealift requirements. He was responsible for developing a broad logistics program that assured maximum operating efficiency at minimum cost for an undertaking that involved a total of 172 ships carrying over 8.9 measurement tons of cargo on about 1,800 voyages to Vietnam during the period of 1965 to 1970. He demonstrated outstanding management and leadership qualities in administering this program.



Harold A. Bedient

Chief, Data Automation Division National Weather Service National Oceanic and Atmospheric Administration

Behind the rapid advances in automatic weather analysis and forecasting during the past 20 years Mr. Bedient has been among the few on the international scene who has played a leading and unique role. He is responsible for the solution of a host of new problems including automatic weather analysis, data processing, graphics, and communications. An outstanding characteristic of his work has been the general nature of his solutions to problems. This has given his work a lasting quality. Principles he has developed are used throughout the world, in many cases outside the field of meteorology.



Stuart G. Bigler

Chief, Sounding Systems Branch National Weather Service National Oceanic and Atmospheric Administration

With a high degree of ingenuity and leadership, Mr. Bigler has directed the radar and rawinsonde programs of the Weather Service to important gains in effectiveness and efficiency. He has had a leading part in the conception and development of slow-scan radar remoting, including dial-phone connections, of quantitative display of radar data, and of the joint use of FAA radars. Implementation of this latter program has greatly increased radar weather coverage at a very modest cost. He has also facilitated the project to use computers in rawinsonde data reduction, making possible greater accuracy at reduced cost. As a recognized authority on radar meteorology, he has provided guidance to many national and international organizations.



Douglass D. Crombie

Supervisory Physicist, Environmental Research Laboratories National Oceanic and Atmospheric Administration Boulder, Colorado

Mr. Crombie has made exceptional contributions to radio science since 1962, including elucidation of the physics of radio wave propagation via the earth and ionosphere over great distances at very long wavelength. He has helped to increase the understanding of solar effects in the earth's lower ionosphere. He has played a major part in the conception and development of electromagnetic remote geophysical observing and measuring techniques. Mr. Crombie has provided leadership of ionospheric radio research programs. His accomplishments include the description and explanation of important sunrise VLF wave fading phenomena as interference between wave guide modes in the concentric earthionosphere wave-guide.



Guy H. Dorsey

Chief, Personnel Division Administration and Technical Services National Oceanic and Atmospheric Administration

Mr. Dorsey has served in various capacities in the field of personnel management, both at the Departmental level and Bureau level for the past 25 years, and has 35 vears of outstanding service in the Federal Government. His leadership and consistently able advice to the Administrator of the agency have created a positive approach to all areas of personnel management and especially in the sensitive areas of labor-management relations. It is a tribute to his skill as an administrator that the merging of several bureaus into the largest scientific agency in Commerce was achieved and the integration of diverse technical and scientific disciplines accomplished without a serious disruption in programs. His keen insight into and awareness of the problems associated with personnel management in the Department of Commerce has proven an invaluable asset to the agency and its top management.



R. Cecil Gentry

Director, National Hurricane Research Laboratory Environmental Research Laboratories National Oceanic and Atmospheric Administration Miami, Florida

Through his outstanding scientific capability in the area of hurricane research and through his own leadership ability Dr. R. Cecil Gentry led Project Stormfury in 1969 through its most successful season. The results of this seeding of Hurricane Debbie in August of 1969 strongly suggest that man is on the threshold of being able to moderate the intensity of these destructive storms. The success of this operation is due in large measure to Dr. Gentry's personal ability.



Harold L. Frost

Supervisory Meteorologist National Weather Service National Oceanic and Atmospheric Administration Lubbock, Texas

Under Mr. Frost's leadership of the weather warning program at Lubbock, Texas, an extraordinarily competent severe weather warning service has been developed and maintained. Outstanding skill and action were displayed by the Lubbock Weather Office in issuing warnings over one hour in advance of the tornado which generated and first set down over the downtown area of the City of Lubbock on May 11, 1970. The tornado caused damage between 100 and 200 million dollars. The warnings are given much credit for the low loss of life in this city of 170,000 people.



Stanley L. Rosenthal

Supervisory Research
Meteorologist
Environmental Research
Laboratories
National Oceanic and Atmospheric
Administration
Miami, Florida

Dr. Rosenthal has produced the first numerical model of a hurricane which has many of the characteristics observed in nature's storms and can be utilized to simulate hurricane modification experiments. These laboratory experiments can be used in conjunction with field experiments as well as for the design of new experiments and techniques for the hurricane modification program (Project Stormfury). His contribution to science has required exceptional skill and ingenuity and has resulted in highly meritorious authorship. Thus, Dr. Rosenthal has brought recognition to the Department of Commerce and to the agency. He is currently engaged in development of a much more complex hurricane model which may even more closely approximate a real hurricane.



Kirk Bryan Research Meteorologist

Syukuro Manabe

Research Meteorologist
Environmental Research
Laboratories
National Oceanic and Atmospheric
Administration
Princeton, New Jersey

The research of Dr. Kirk Bryan and Dr. Syukuro Manabe in the simulation of the joint large-scale circulations of the atmosphere and ocean marks a significant milestone in the history of the attempts to model the earth's fluid envelope. They have succeeded in formulating and constructing a comprehensive mathematical model for the joint system, which upon the application of the high-speed computer, simulated the evolution of the circulation and climate of the combined fluid system, providing new and clearer insights into the nature and consequences of the long-term mutual interaction of the atmosphere and the deep oceans.



Clarence A. Kalk

Assistant Commissioner for Administration Patent Office

This award is granted in recognition of the outstanding administrative contributions rendered by Mr. Kalk to the Patent Office and Department of Commerce. These superior contributions include his personal efforts in directing the acquisition of new quarters in which to house the Patent Office. a contribution which has been extremely effective in creating a professional atmosphere for the more than 1,200 patent examiners employed in the Office, and in making the agency a much more stable and efficient one. His performance as Assistant Commissioner for Administration has resulted in bringing order, direction, and purpose to the numerous key service areas, and has contributed in a very large degree to making these units more effective not only for the internal functioning of the Patent Office, but also to providing considerable improvement in our service to the public-an area which is of paramount importance to the Patent Office mission.



Mark M. Newman

Supervisory Primary Examiner Patent Office

Mr. Newman has demonstrated outstanding leadership in the administration of a major program. As the Departmental Liaison Officer to the National Alliance of Businessmen, he performed distinguished service as Staff Assistant and as Director of Planning and Analysis of the Alliance. In these capacities, he not only assisted in the organization of the Alliance but was also responsible for developing and implementing short and long range operational plans and for coordinating the Alliance's field operations.



J. Albert Keefer

Congressional Liaison Officer Office of the Secretary

Mr. Keefer's contribution to the success of the Department's legislative program has been consistently outstanding. He has kept his superiors in the Department extremely well informed on the progress of the Department's legislative program and on developments in the Senate that have a bearing on the activities of the Department. His long associations in the Senate with Members and staffs on both sides of the aisle, his competence in handling inquiries and complaints, and his keen judgment and knowledge of the legislative spectrum have been invaluable assets to the Department and have contributed greatly to the public interest. His advice and judgment on sensitive legislative matters have been consistently accurate and responsive to the needs of the Department.



Andrew J. Nemshick

Director, Office of Financial Management Services Office of the Secretary

Mr. Nemshick has been directly responsible for rare and outstanding contributions to the Department's financial management program over the past two years. Serving consecutively in the positions of Deputy Director, Office of Budget and Finance, and Director, Office of Financial Management Services. he has, through strong and personal leadership, identified and eliminated or placed under control all major backlogs. Under his direction, for the first time, complete documentation on the Office of the Secretary accounting system has been prepared. Serious reporting delays in all reports have been overcome. He has assumed responsibility as Manager of the Office of the Secretary Working Capital Fund and established a client advisory group. Mr. Nemshick has vastly improved the reliability, accuracy and timeliness of monthly cost statements.



Wade B. Ropp

Deputy Director of Personnel Office of the Secretary

Wade B. Ropp has made major contributions to the Department of Commerce personnel management program. He has displayed superb, overall technical knowledge of personnel management and has demonstrated outstanding program leadership. His efforts have directly contributed to outstanding programs in such areas as equal employment opportunity and special employment programs. His overall knowledge of personnel management can also be seen in his highly successful administration of personnel ceilings and his responsiveness to programs of Administration interest. He has also been the impetus behind the development of Career Management Programs thus improving career opportunities for employees. Wade B. Ropp has earned the respect of his colleagues, both within and without the personnel fraternity, by his energy, resourcefulness and knowledge of what it takes to develop, implement and maintain excellence in personnel management.



Alan D. Franklin

Research Chemist National Bureau of Standards

Dr. Franklin's contribution to the science of point defects in solids has been indeed outstanding. His effective administrative action in creating an internationally recognized materials science group at the National Bureau of Standards. his service in an advisory capacity to other branches of government, his service to the nation by advancing the education of materials scientists and his effort in directing their research to goals consistent with modern technological needs are all aspects of his performance worthy of acclaim.



Joseph Hilsenrath

Chief, Data Systems Design Group National Bureau of Standards

Mr. Hilsenrath is recognized for innovative and pioneering work in the development of software for the analysis of scientific data, text editing, and information storage and retrieval that have been accepted widely throughout the scientific community. In addition, he has been effective in promoting these techniques by developing workshops and conferences for disseminating information which have been of great value especially to those programs associated with standard reference data.



Donald Alfred Jennings

Chief, Quantum Electronics Section National Bureau of Standards Boulder, Colorado

Dr. Jennings has made very valuable contributions in quantum electronics and in the development of absolute laser power and energy standards and measurement techniques. It is through Dr. Jennings' pioneering efforts that the National Bureau of Standards holds a position of world leadership in the development of laser standards. His contributions have had significant impact on the growth of laser applications during its critical period of emergence as an industrial technology. His leadership in the development of programs and facilities in support of laser standards has assured the National Bureau of Standards continued leadership in developing laser standards and in exploiting laser technology to support measurement science.



Malcolm W. Jensen

Acting Director Institute for Applied Technology National Bureau of Standards

Mr. Jensen's dynamic leadership, progressive philosophy, technical competence, keen sense of awareness, persuasive abilities, and public-minded responsibility have enabled the Bureau to expedite the solution to many problems having national importance or effect. He is recognized both within and without government for his tremendous personal drive and his capacity for handling large volumes of correspondence, telephone calls, and visitors. He is highly respected by all who know him as a dedicated and extremely capable government executive who has proven his competence and ability in the field of weights and measures administration, packaging and labeling standardization, voluntary standards procedures and policies, and in mandatory standardization programs.



Walter Koidan

Physicist National Bureau of Standards

Mr. Koidan is an outstanding worker in the field of acoustic standards, both as a contributor to the scientific basis of standards and as a manager of extensive standardization programs. For example, as chairman of American National Standards Institute Committee S1, Acoustics, he manages and supervises about 24 standardization programs, some 12 of which are of great concern today. The role of good standards, having a firm scientific basis, in any branch of technology does not need to be urged. Mr. Koidan's selection as chairman of S1 was in recognition of outstanding contributions in the laboratory and as a member of standards writing groups, activities in which he is still engaged. Overall, his influence on acoustic standards activities, both national and international, is unique.



Marilyn E. Jacox

Physical Chemist National Bureau of Standards

Dolphus E. Milligan

Physical Chemist National Bureau of Standards

Drs. Jacox and Milligan have achieved international recognition for their outstanding work on the infrared spectroscopy of matrix isolated free radicals. The establishment of the conformation of many of these active, free radical intermediates, the explanation of the hydrocarbon flame bands, and the pioneering research in free radical ions are a few examples of the splendid contributions Drs. Milligan and Jacox have made to chemistry as part of the National Bureau of Standards program.



Lee J. Kieffer Stephen J. Smith Gordon H. Dunn

Physicists National Bureau of Standards Boulder, Colorado

Beginning in 1965 Drs. Dunn, Kieffer, and Smith have made exceptional contributions in the establishment of criteria for valid atomic collision measurements. outstanding contributions made by these men is in the development of the criteria by which the data in the literature are to be judged. These criteria are guides to research investigators, telling them how the measurements must be made so that, when evaluated, the limits of systematic error can be determined and the data designated as standard reference data. The great success of the reviews discussed above is that they deal directly with the development of these criteria and criticize the literature in the light of them. There is already substantial evidence that the practices of working scientists have been modified and improved as a result of this work.



SILVER MEDAL AWARD WINNERS

Jean R. Frazier

Economist
Office of Business Economics

Miss Frazier has made a major contribution to the operations of the Office of Business Economics through her applications of the input-output technique to the analysis of various problems related to economic growth. An outstanding example of the Federal Government's use of input-output is in connection with the Interagency Growth Study, a large scale effort in which the Department of Commerce is participating along with the Department of Labor, the Office of Management and Budget and the Council of Economic Advisers. A major objective of this interagency program is the development of detailed projections of industry outputs and employment under alternative assumptions as to rates and patterns of economic growth.

Elizabeth H. Queen

Statistical Assistant Office of Business Economics

Mrs. Queen has made a significant contribution to the development of the Office of Business Economics' Regional Economics Information System which is widely used in the measurement and analysis of urban and regional economic problems. Mrs. Queen has exhibited unusual skill in developing and adapting a massive quantity of State-generated economic data for use in measuring incomes in local areas. Her knowledge of the

local-area data, her editorial and supervisory abilities in adapting the series for use in economic measurement, and her skill in integrating the locally-produced data into the regional income series have made a major contribution to the success of the series. Mrs. Queen has been especially effective in maintaining liaison between various State and Federal agencies and the Office of Business Economics.

John C. Cullinane

Regional Director Bureau of the Census New York, New York

Mr. Cullinane is recognized for his outstanding leadership and ingenuity in the direction of New York Regional operations during the preparatory period of the Decennial Census and in the conduct of the Census itself. His superior administrative ability enabled him to cope with the most adverse conditions conceivable for census taking-the administration of 34 district offices in New York City, four adjacent New York counties, and 26 New Jersey counties. These districts contained large areas of deteriorated housing and were often hotbeds of resistance to the census. His leadership during the census and in his continuing current programs under such adverse conditions far exceed all reasonable standards.

John G. Gibson

Regional Director Bureau of the Census Philadelphia, Pennsylvania

Mr. Gibson's direction of the Philadelphia Region during the preparatory period of the Decennial Census and during the conduct of the Census itself demonstrated his outstanding leadership and administrative capabilities. The recognition accorded to him is not only for the skills and dedication he displayed but also for his ability to cope with the most adverse conditions conceivable for census taking—the administration of 35 district offices in Pennsylvania, Delaware, Maryland, the District of Columbia and parts of New Jersey and Virginia. His leadership in census operations and in his current programs under such conditions far exceeds all reasonable standards.

Raymond J. Koski

Assistant to the Division Chief for Publications— Bureau of the Census

Mr. Koski has demonstrated outstanding leadership and technical ability in establishing a centralized publications program for the Bureau of the Census. His organizational ability, industry, and initiative effected a smooth transition from a decentralized to a centralized publications program comprised of a wide variety of publications covering census, current survey, technical papers, and special reports. He has readily adopted new methods and procedures to improve the quality and timeliness of the Bureau's publications.

Ernest M. Moore

Manager, Uganda Computer Services Bureau of the Census Kampala, Uganda

In his capacity as U.S. Bureau of the Census Data Processing Adviser to the Government of Uganda and Manager of Uganda Computer Services within the Government of Uganda, Ernest M. Moore established the first computer center in Uganda. With outstanding success he trained a Ugandan staff in computer operations, systems analysis and programming, automated the Government's highest priority management services and information systems, and earned the Government's approbation and support for the use of modern methods and equipment in public administration.

Naomi D. Rothwell

Statistician (General) Bureau of the Census

Mrs. Rothwell made two significant contributions to the coverage improvement program for the 1970 Census. Her creativity in developing and testing new approaches to the solution of long-standing problems and in effectively translating research findings into operating programs and procedures was outstanding. In addition, her development of a public education program for major cities proved invaluable in upgrading census procedures. Mrs. Rothwell sought and obtained cooperation from a large number of consultants, civil rights

organizations, and community organizations in developing the program. Her unusual ability to communicate technical and statistical concepts in layman's terms was largely responsible for gaining effective cooperation of these civil rights and community organizations.

Masey Volk

Program Manager, Systems Division Bureau of the Census

Mr. Volk has made substantial contributions to improved data collection and processing operations of the 1970 Census of Population and Housing in the design and printing of source documents for reading by FOSDIC 70 and in the microfilming, film developing and processing on FOSDIC 70. Specifically he has designed strategic documents to reduce technical difficulties during scan of microfilm images of source documents, trained contract printers and followed-up on output quality, and persisted in obtaining a faster, thinner microfilm which will result in savings to the government of approximately one million dollars. In addition he has arranged for on-site laboratory processing of microfilm thus reducing potential reruns and efficiently planned logistics and procedures for producing over three hundred million frames of microfilm for optical scanning.

Donald F. Clark

Supervisory Mathematical Statistician Bureau of the Census

Carl J. Bostrom

Mathematical Statistician Bureau of the Census

Messrs. Clark and Bostrom are recognized for their exceptional contribution to the technology of editing complex statistical reports. The powerful, highly flexible computer editing programs which they devised for application to the hundreds of thousands of industrial statistical reports processed on the average each year by the Bureau of the Census constitute a major advance in this essential phase of the Bureau's work. They exhibited extraordinary skill both in developing the sophisticated systems now employed and in translating their plans into specifications that could be implemented by computer programs and into nontechnical descriptions readily understandable by analysts and clerks who manipulate the results of the programs.

Donald E. Young

Assistant Division Chief for Industry Surveys

Alan I. Blum

Chief, Special Trades Contractor Branch

Edward K. Ricketts

Mathematical Statistician Bureau of the Census

Messrs. Donald E. Young, Alan I. Blum, and Edward K. Ricketts distinguished themselves by success-

fully executing the 1967 Census of of the Construction Industries. The 1967 Census provides the first complete statistical description of an important segment of the nation's economy, representing a major advancement of the Census Bureau's construction statistics program by providing bench marks and insights heretofore not available. Operating under budget, personnel, and procedural constraints, this group performed as a highly motivated, coordinated, and harmonious force displaying an exceptional sense of dedication and public service .

J. William Nelson

Director, U. S. Expositions Staff Bureau of Domestic Commerce

Mr. Nelson is recognized for his outstanding achievements in the direction of the U.S. Expositions Staff. His accomplishments include the successful closeout of Hemis-Fair and the planning and recommendations for residual use of the Pavilion. theater grounds in San Antonio. The Pavilion is to be converted into a courthouse at a savings to the taxpayer of about \$1 million. Mr. Nelson has recently made valuable contributions to the American Revolution Bicentennial Commission by reviewing exposition proposals to the Commission.

J. Davidge Warfield

Director, Office of Business Development Economic Development Administration

Mr. Warfield is recognized for his valuable contributions in improving the Economic Development Administration's business program. He has been directly responsible for several highly effective program innovations-a computerized system for portfolio management; a financial guideline manual spelling out EDA's loan policies; a significant increase in jobs created for the same program funds by virtue of restructuring lending criteria; a material reduction in the risk of loss in the portfolio; and the initiation of a lending program aimed at creating the capital for the minority of which the Watts Manufacturing divestiture was the first example.

Richard L. Tavrow

Chief Counsel Office of Foreign Direct Investments

Mr. Tavrow has made an outstanding contribution to the success of the complex direct investment controls. He has consistently exhibited superior knowledge and sound judgment involving the legal aspects of the Program, international finance and the balance of payments. He has distinguished both himself and the Office through his proficiency in resolving a variety of broad policy questions asso-

ciated with the Program. He has dealt effectively and diplomatically with high corporate and government officials involved with the Office. His outstanding efforts contributed significantly to the successful accomplishment of the mission of the Office to reduce the impact of foreign direct investment on the U.S. balance of payments in 1968 and 1969.

Forest E. Abbuhl

Director, Office of International Trade Policy, Bureau of International Commerce

Mr. Abbuhl has given outstanding leadership and has shown substantive skills in developing and advocating the Department's and the United States Government's position in the trade policy field, including the formulation and review of legislative and administrative proposals, development and negotiation of reduction of foreign tariff and nontariff barriers, and the development and implementation of international trade rules.

Alfred E. Fiore

Professor, Department of Nautical Science U. S. Merchant Marine Academy Maritime Administration Kings Point, New York

Professor Fiore is recognized for his major contributions to the science, technology, and administration of electronic navigation. His contributions in teaching, committee work and institutional participation have been of the highest order. As Chairman of the Special Committee No. 60, RTCM, his skillful guidance contributed immeasurably to a completion of the report encompassing the navigational needs of the entire marine services.

John H. Lancaster

Assistant to the Chief, Office of Ship Construction Maritime Administration

Mr. Lancaster's distinguished career features outstanding service to both industry and government. While achieving the rank of Chief Engineer in a major shipyard, he successfully pioneered complex developments including major projects in mechanized cargo handling and power plant automation. Joining the Maritime Administration in January 1965, he motivated numerous undertakings of significant importance. These include the direction of the Shipping Study for the Atlantic-Pacific Interoceanic Canal Study Commission for which he received special commendation.

Frederick Tirling

Chief, Division of Operating Agreements Maritime Administration

Through Mr. Tirling's extraordinary effort and effectiveness as Contracting Officer in dealing with 40 General Agents for the operation of 175 Government-owned ships in the Southeast Asia Sealift, the Maritime Administration was able to carry out its mission of supporting the military effort in Vietnam at great savings to the Government.

Glenn Ball

Chief, Instrument Approach Procedure Chart Branch National Ocean Survey National Oceanic and Atmospheric Administration

Glenn Ball effected a major contribution to the national Instrument Approach Procedure Charting programs by his immediate response to the constantly changing requirements of air navigation and his administration of charting assignments imposed by action of the Interagency Air Cartographic Committee (IACC). As Commerce member of the IACC task group on instrument approach procedure charts, Mr. Ball successfully negotiated differences with representatives of the Department of Defense and the Federal Aviation Administration and helped develop joint civil/military specifications for these charts. He is consulted regularly by the Federal Aviation Administration for advice in preparing the approach procedures upon which the charts are based.

John C. Carroll

Supervisory Electronic Engineer Environmental Research Laboratories National Oceanic and Atmospheric Administration Boulder, Colorado

John C. Carroll is commended for the design and supervision of a very high power transmission facility for ionospheric research. The advanced design of this transmitter was established with exceptional efficiency and flexibility. In addition Mr. Carroll's design was such that the facility was constructed for approximately half the cost of commercial construction. His design and construction of this transmitting facility provides a new research tool for which broad utilization is anticipated. This, at a comparatively low cost, is a major step forward in the transmission field.

Max M. Chesy

Assistant Chief, Visual Services
Branch
Administrative Operations
Division
Administration and Technical
Services
National Oceanic and Atmospheric
Administration

Mr. Chesy has demonstrated, during 35 years of continuous Federal employment, dedication and devotion to duty over and above that normally expected. Mr. Chesy has shown exceptional ability in the planning, designing, and execution of publications in the promotion of

a better understanding of scientific services of the Department of Commerce. The knowledge he has gained over long years of Federal Service has been an aid to the inspiration of those working under him. He is regarded with the highest esteem throughout the Federal Government.

Hilmer A. Crumrine

Severe Storms Forecaster National Weather Service National Oceanic and Atmospheric Administration Kansas City, Missouri

Mr. Crumrine rendered outstanding forecast service in connection with the Texas Panhandle tornado outbreak of April 17-18, 1970. Between 10:00 P.M. and 2:30 A.M. at least six destructive tornadoes struck the area doing widespread devastation. All tornadoes were located within the boundary of a watch bulletin issued tornado earlier by Mr. Crumrine, giving local authorities advance notice to alert the residents. Mr. Crumrine's outstanding forecast helped cut down on the high death toll that so often accompanies the nighttime tornado. In addition his skill over the past five years has been demonstrated by his correct forecasting of a tornado outbreak known as the "Palm Sunday" and of an outbreak on May 15, 1968, which was second only to the "Palm Sunday" in severity.

Spellman J. Diez

Publications Distribution Specialist National Ocean Survey National Oceanic and Atmospheric Administration

During the early part of fiscal year 1970, three field distribution offices were closed and all chart distribution was centralized in the Distribution Division located in Washington, D. C. Mr. Diez was made action officer for coordinating the merger of these offices. His accomplishments have been so exceptional that nationwide chart distribution was maintained efficiently and effectively during the period of transition. He has made outstanding contributions in the development of improved systems for processing the sudden increase in the volume of chart orders and in improving our service to the public in the area of national marine and air navigation systems.

Agnes B. Erkens

Budget Analyst Administration and Technical Services Budget Division National Oceanic and Atmospheric Administration

Miss Erkens has rendered an unusually valuable service to the Department of Commerce as an outstanding authority on agreements for financial support of interagency programs. Through dedication to duty and a continuing interest in improved public administration, she has developed an exceptional expertise in the ne-

gotiation of effective inter-agency working agreements. With this unique competence, she has served project managers throughout the organization with particularly helpful advice and counsel on inter-agency negotiation and on proposed working agreements.

Earl W. Estelle

Executive Assistant to the Associate Director National Weather Service National Oceanic and Atmospheric Administration

Earl W. Estelle is commended for his initiative and achievements in management, far exceeding the normal requirements of his position, that have been directed toward the improvement of the Weather Service's operations. Foremost among his accomplishments has been the creation of the Weather Service's Directives System. This system has placed in a single code, for the first time, the technical and management directives bearing upon the various echelons of the Weather Service and has filled a long-standing and significant Service need. The combination of technical insight, management ability, and exceptional initiative possessed by Mr. Estelle has produced an excellent management tool and operating guide.

Dale Gough

Personnel Officer
Environmental Research
Laboratories
National Oceanic and Atmospheric
Administration
Boulder, Colorado

Through his outstanding leadership in the Research Laboratories Personnel Program, Mr. Gough has made significant advances in the areas of Equal Employment Opportunity, Occupational Health Services and the Junior Fellow Program. His harmonious and constructive labor/management relationships are also worthy of note.

Arthur F. Gustafson

Meteorologist in Charge National Weather Service National Oceanic and Atmospheric Administration San Francisco, California

Mr. Gustafson has made outstanding contributions to the development of operational weather forecast procedures and practices in providing a high quality weather service. He has set the pace and standards for the management of large weather forecast centers in the United States. With his superior knowledge of theoretical meteorology, coupled with a keen appreciation of practical meteorological requirements, he has advanced the practice of weather forecasting at San Francisco to the highest technical level of any forecast center in the National Weather Service. His prestige goes well beyond the confines of his regional responsibilities; his meteorological influence has had its impact on the total mission—especially in the maximum utilization of meteorological satellite products and improvements in the National Meteorological Center's computer products. Through Mr. Gustafson's progressive leadership and initiative, this center has become a leading operational forecast unit and the focal point for testing the operational usefulness of new ideas and practices.

Richard H. Houlder

Commander
National Ocean Survey
National Oceanic and Atmospheric
Administration

Commander Richard H. Houlder is commended for his outstanding administrative leadership in the application of recent technological advances to a State cooperative program for Tidal Datum Plane Determinations and the mapping of seaward boundaries using infrared and color photography. He has also excelled during the pilot project on photogrammetric underwater contouring to aid in hydrographic surveys and during the photographing of hurricane Camille damage. He also obtained photographs of American Samoa in spite of continuous inclement weather.

Marvin N. Hunter

Supervisory Meteorologist National Weather Service National Oceanic and Atmospheric Administration

Mr. Marvin N. Hunter is recognized for his achievements in improving the accuracy and effectiveness of the aviation and marine forecasting programs over a period of many years. His dedication, ability, knowledge and supervisory talents allowed him to develop and devise objective forecasting techniques which utilized the numerical computer products. Through his efforts the use of numerical guidance has kept abreast in these fields with the progress of numerical aids.

Robert C. Husted, Jr. Lt. (jg)

National Ocean Survey National Oceanic and Atmospheric Administration Seattle, Washington

At approximately 6:00 A.M. on October 26, 1969, in Ketchikan, Alaska, Wiper John Fleagle entered the room of Lieutenant Husted on board the Ship Mc-Arthur after being shot in the back on the pier. Lieutenant Husted attended to the immediate medical needs of the wounded man and, determining that the gunman was aboard holding the captain and quartermaster at gun point, left the ship at considerable risk to his life to run barefoot to the Coast Guard Base, about half a

mile away, to summon an ambulance and police. His timely action resulted in quick medical attention for the wounded man and prompt apprehension of the gunman.

Frank Lewis

Chief, Computer Systems Branch National Weather Service National Oceanic and Atmospheric Administration

Frank Lewis demonstrated exceptional ability in applying computer programming techniques to a large variety of difficult technical problems. A notable example of his achievement is the development, implementation, and improvement of a completely autosystem for forecasting maximum and minimum surface temperatures at 131 cities in 48 states. His other achievements include: the execution of numerical experiments to determine optimum spacing of upper air stations for the World Weather Watch: the derivation of climatalogical statistics on variability and interrelationship of wind and temperature at high levels; and the design of computer programs for comparative verification of upper wind forecasts for the tropical Pacific.

Stephen Lichtblau

Meteorologist in Charge National Weather Service National Oceanic and Atmospheric Administration New Orleans, Louisiana

Mr. Lichtblau has done a commendable job as Meteorologist-in-Charge of the New Orleans National Weather Service Forecast Office since his assignment in 1943. During the past decade, warnings issued by this office have been of great benefit. Civil Defense, state law enforcement organizations and the press have praised the early warnings for Hurricanes Carla on the Texas coast in 1961; Betsy in Texas in 1967; and Camille on the Mississippi coast in 1969. The toll of lives lost would have been much greater if it were not for the effective warnings of Mr. Lichtblau. He is recognized as the leading authority on flood potential of the Lower Mississippi River.

Grady F. McKay

Digital Computer Systems
Administrator
Environmental Data Service
National Oceanic and Atmospheric
Administration
Asheville, North Carolina

Mr. McKay has played a leading role in the conception, implementation and operation of a centralized, consolidated interagency computer facility for processing Commerce-Air Force environmental data at Asheville, North Carolina. He was a co-suggestor of the proposal to establish the facility and has provided vigorous, imaginative support to its implementation. The computer facility provides computer compatibility, and the capability for rapid environmental data exchange between not only Commerce and the USAF, but the entire world scientific community. Ultimately this development could result in a common computer accessible data bank for all the environmental sciences on a world-wide basis.

Howard J. Mason, Jr.

Chief, Research Flight Facility
Environmental Research
Laboratories
National Oceanic and Atmospheric
Administration
Miami, Florida

Howard Mason's leadership, experience and technical knowledge has greatly contributed toward making Research Flight Facility (RFF) one of the most effective research tools available in the world today. Together with his able flight crews, Mr. Mason has personally flown through countless hurricanes and other severe storms in many parts of the world. In 1969 Mr. Mason's guidance and personal involvement in the development and operation of advanced and complex instrumentation were to a large part responsible for the success of Projects Bomex and Stormfury. One thousand hours flown, day and night, on missions frequently exceeding 11 hours and at altitudes as low as 50 feet above the tropical ocean, resulted in excellent data on the energy flux between ocean and atmosphere. Immediately following the Bomex Project, continuous

penetrations and monitoring of a seeded hurricane led to a breakthrough for Project Stormfury, resulting for the first time in the quantitative verification of successful hurricane modification.

Herbert W. Rahmlow

Electronic Engineer National Weather Service National Oceanic and Atmospheric Administration

Mr. Rahmlow has advanced National Weather Service programs by his outstanding skill and ability. He established and developed the Reconditioning Center, which provides more than 20,000 used upper air instruments annually thus saving nearly \$4,000,000 in program costs during its years of operation. He also established and developed a technical training facility to provide formal training for electronic technicians in the maintenance of specialized meteorological instruments and equipment systems.

Gerald L. Shak

Regional User Services Representative National Weather Service National Oceanic and Atmospheric Administration Garden City, New York

Throughout his career Mr. Shak has displayed unusual progressive leadership in all weather services, especially as Regional User Services Representative for the Eastern Region. He has stimulated tremendous cooperation, interest and support of radio, TV, newspaper and wire services. His visits to all 16 states within the region have brought about new sources of local broadcasts, improved TV-weather presentations and newspaper coverage. He has an excellent ability to work harmoniously with associates from top management to the newest recruit, especially with users of the wide variety of weather forecasts. Mr. Shak's initiative and efforts were major contributing factors to the development of the first successful observing-briefing office and to the use of VHF-FM continuous weather broadcasts.

John J. Smiles

Chief, Visual Services Branch Administrative Operations Division Administration and Technical Services National Oceanic and Atmospheric Administration

Mr. Smiles' execution of managerial responsibilities during the past seven years has resulted in the creation of a highly effective activity which has gained national and international prominence in the field of scientific audio visual presentation. His counsel is sought from varied sources throughout the Federal Government, as well as from scientifically oriented organizations.

Mirco P. Snidero

Chief, Computer Division Administration and Technical Services National Oceanic and Atmospheric Administration

Mr. Snidero's expert management of the agency's very complex and widely dispersed computer facilities has resulted in computer rental savings totalling nearly \$3 million as of the end of fiscal year 1970. Further developments in efficiency improvements currently underway will make possible an additional saving of almost onequarter million dollars each year. He pioneered an in-service training course for computer operators which considerably improved career opportunities for a number of low grade employees formerly in dead-end positions.

Wilmer L. Thompson

Director, Southern Region National Weather Service National Oceanic and Atmospheric Administration Ft. Worth, Texas

Mr. Thompson has demonstrated outstanding leadership in the administration of National Weather Service programs in the Southern Region, particularly its warning programs involving severe storms such as tornadoes and hurricanes. Under his guidance the Southern Region in cooperation with local communities and disaster organizations has developed and maintained a very high level of preparedness to protect life and property from these killer storms.

These preparedness plans have undoubtedly saved thousands of lives. For example, 200,000 people were displaced by Hurricane Camille alone during 1969. Without effective advance warning and preparedness plans developed under Mr. Thompson's direction, this storm would have caused a major disaster.

Maurice J. Vetter

Electronic Engineer
Environmental Research
Laboratories
National Oceanic and Atmospheric
Administration
Boulder, Colorado

Maurice J. Vetter is recognized for his outstanding engineering accomplishments relating to the interaction between electromagnetic waves and the lower atmosphere. He has conducted an extensive study of methods of temperature compensation which resulted in sensors with coefficients of a few parts in 100 million per degree centigrade. Mr. Vetter developed a new circuit configuration, incorporating feedback loops to minimize instabilities from the klystron by several orders of magnitude, permitting much greater long-term calibration stability. This instrument is known in the field as the "Vetter absolute refractometers." As a result of Mr. Vetter's work, the sealed reference cavity which limited instrumental stability was replaced by an inexpensive quartz crystal oscillator.

Harry W. Waldheuser

Principal Assistant
National Weather Service
National Oceanic and Atmospheric
Administration
St. Louis, Missouri

Mr. Waldheuser has been outstandingly effective as the Principal Assistant of the National Weather Service Forecast Office in St. Louis, Missouri. He has demonstrated unusual competence and initiative in the development of local forecast and warning programs. Utilization of techniques and communication procedures developed by Mr. Waldheuser has resulted in the timely issuance of life-saving warnings during critical storm periods. Through effective coordination he has established a rapport with other government agencies and news media that has brought considerable credit and recognition to the National Weather Service as well as the Department of Commerce.

James M. Watts

Electronic Engineer Environmental Research Laboratories National Oceanic and Atmospheric Administration Boulder, Colorado

James M. Watts is recognized for his many substantial engineering and scientific contributions. He has pioneered the use of LF sounding of the ionosphere at vertical incidence, extending sounding techniques down to as low as 50 kHz. He originated the HF Doppler technique for studying ionosphere motions. Mr. Watts has developed "chirp" methods for vertical incidence ionosphere soundings, a technique which is, inter alia, of great value in reducing interference, and increasing sensitivity. He also played a large part in developing a usable system for making partial reflection studies of the D region of the ionosphere, which is a difficult technique because of the extreme weakness of the reflections in the D region.

Chalmers C. Wooden

Meteorologist in Charge National Weather Service National Oceanic and Atmospheric Administration Montgomery, Alabama

Mr. Wooden, by exercising great patience, persuasion and tact in the face of unfavorable odds has skillfully executed the announced objectives of the Weather Service Severe Weather Preparedness Planning Program for Alabama. These efforts, coupled with his expert technical knowledge and long experience, have resulted in a working arrangement with the Alabama Department of Civil Defense and other state departments with public safety responsibility which mobilize, on need, the manpower and communications resources of these offices in strong support of the preparedness program. Nearly 1,200 state and local officials have been trained in tornado spotting and reporting. The full communications facilities of state departments are now available, on demand, for dissemination of Weather Service warnings.

William Lee Woodley

Research Meteorologist
Environmental Research
Laboratories
National Oceanic and Atmospheric
Administration
Miami, Florida

Dr. William Lee Woodley's work in relating cumulus growth following seeding to rainfall production is a major landmark in cloud physics and in weather modification. He played a leading part in design and execution of a multi-aircraft cumulus seeding experiment in Florida in 1968, devising a successful method of field testing the seeding pyrotechnics used. He evolved a method of rainfall evaluation with calibrated 10-cm radar and used it to show that the seeded clouds precipitated about twice as much as the controls. Furthermore, Dr. Woodley demonstrated that the seeded clouds produced more rain because of induced dynamic changes which made them grow larger and last longer. He related the precipitation, through cloud growth, to the predictions of a numerical model, thus clarifying conditions under which rainfall may be increased.

Philip Brandis

Acting Branch Chief, Information Processing Branch National Weather Service National Oceanic and Atmospheric Administration

Charles Carpenter

Computer Systems Analyst National Weather Service National Oceanic and Atmospheric Administration

Mr. Brandis and Mr. Carpenter supervised an extensive programming effort in a real-time communication computer, materially aiding implementation of an interface to a new Canadian Weather Switching System. This is an important step in advancing the World Weather Watch system. Success was due to their unrelenting efforts in every part of the program, and their personal example and innovative ideas inspired their colleagues.

Abraham Berlin

Director, Handling and Transporting Media Group Patent Office

Mr. Berlin has demonstrated outstanding leadership and initiative in the administration of the Handling and Transporting Media Examining Group of the Patent Office. His development of new practices and procedures have played an important part in the advancement of programs within the Patent Office. The concepts used in administering this Group are highly innovative.

Hyland Bizot

Primary Examiner Patent Office

Mr. Bizot has performed outstandingly as a Patent Examiner in the rapidly advancing fields of Barrier Layer Material Preparation, such as transistors, and of ferrous alloys, involving concepts in the newly developing fields of Solid State Physics and Chemistry. His performance has had an exemplary and beneficial effect far beyond his individual accomplishments in advancing Patent Office and Departmental goals. In addition he has served the Office outstandingly in other capacities, such as chairing the Curriculum Committee of the Patent Office Academy which the Office places great reliance for the proper training of new examiners.

William Feldman

Special Assistant to the Assistant Commissioner Patent Office

Mr. Feldman has made contributions of unusual value to the Department by applying outstanding skill and ability in performing duties which have significantly advanced the patent examining program of the United States Patent Office. His unusual capabilities to design or redesign patent examining practices and procedures have been skillfully utilized in consultations with patent bar groups and within the Patent Office, resulting in major advances in patent examining programs.

Thomas J. Hickey

Director, Construction and Mining Group Patent Office

Mr. Hickey is cited in view of the high degree of tact and convincing diplomacy used in obtaining the fullest cooperation of his employees in improving the effectiveness of their performed tasks and in adapting themselves to changed systems and procedures. The results have national and international impact due to early disclosure of technology to the scientific community and early assurance of patent posture to aid and guide industry.

Willis H. Hokans

Supervisory Employee Development Specialist Patent Office

Mr. Hokans, as a very valuable member of the Personnel Staff, has served the Patent Office in an outstanding manner by fulfilling specific organizational needs through the initial development of training policies, procedures, and programs. Once the programs have been approved he has implemented and administered them most effectively. Mr. Hokans has performed all elements of his position with outstanding ability which has resulted in the continuing advancement of training programs for the Patent Office. The far-reaching effect of his programs, courses, and publications clearly demonstrate initiative, creativeness, resourcefulness and imagination which have indeed resulted in very valuable contributions to administration.

John M. Horan

Patent Examiner Patent Office

Mr. John M. Horan has been an outstanding Patent Examiner for many years. His work as the Patent Office expert in Photography as it relates to Xerox and Cameras has resulted in shortening the pendency of patent applications. By diligent application to his duties and by studious engrossment in his art he has become an expert in his field.

Clyde E. Ahrnsbrak

Division Chief, Central Accounting Division Office of Financial Management Services Office of the Secretary

Mr. Ahrnsbrak has achieved highly significant improvements in the quality and timeliness of financial services in less than a year as Chief of the Central Accounting Division. His division services nearly 20 separate bureaus, offices and commissions, involving Federal, non-Federal, domestic and foreign accounts. Through his effective planning, organizing and staff direction the installation and documentation of a new cost accounting system was completed, the system was formally approved by the General Accounting Office, and paperwork backlogs and problems in the production of financial statements were eliminated. Along with these solid achievements came greatly improved client and employee morale, obtained through his unique ability to establish and maintain effective human relations at all levels.

Evelyn H. Gray

Manpower Information Officer Office of the Secretary

Mrs. Gray has personally developed specifications for and supervised the installation of the Department of Commerce Uniform Automatic Data Processing System for Personnel Managementone of the most advanced systems of its type in the entire Government. In addition, she has developed, installed and supervised a flexible, economical, and effective manpower information system for the entire Department of Commerce. As a result of Mrs. Grav's contributions, the Department is achieving increased efficiency in manpower utilization in personnel management, increased effectiveness in personnel operations, increased capacity to perform personnel management operations, and improvement of personnel management in operating units through provision of "feed-back" information on personnel matters to operating unit officials.

Marion M. Meadows

Director, Executive Secretariat Office of the Secretary

Mrs. Marion Meadows is recognized for her participation in setting up and developing office procedures for the Executive Secretariat. Under her professional guidance and leadership as Director, the Executive Secretariat plays an important role in creating a good image for the Department intimate Commerce. Her knowledge of the programs and policies of the Department makes her invaluable in coordination and control, for the assignment of action, and for substantive review prior to the signature of all official correspondence of the Secretary and the Under Secretary of Commerce.

Eve F. Rinaldi

Chief, Special Office Services
Branch
Office of Administrative Services
Office of the Secretary

Mrs. Rinaldi is recognized for her superior achievement in providing administrative and property management services to the Secretarial Officers. She has done an outstanding job in preparing the semi-annual Commerce Telephone Directory. Mrs. Rinaldi is also deserving of special recognition for the manner in which she has managed the penalty mail program since its inception in 1953. She has displayed remarkable competence and awe-inspiring devotion to duty in carrying out her assignments.

Robert T. Cook

Supervisory Public Information Specialist National Bureau of Standards

Mr. Cook is recognized for the development, the expansion, and the management of an NBS technical conference program that has focused national attention upon, as well as made use of, the expertise available at the National Bureau of Standards in finding solutions to national problems. These conferences have succeeded in attracting to the Bureau national and international experts for the exchange of ideas not only in the traditional NBS areas of precision measurement but in such areas of social concern, resulting in a collective constructive attack upon such problems as housing, pollution, safety, and better utilization of natural resources.

Thomas C. Farrar

Chemist National Bureau of Standards

Dr. Farrar has achieved recognition for outstanding accomplishments in the field of nuclear magnetic resonance, particularly the development of the Driven Equilibrium Fourier Transform (DEFT) technique of obtaining data. This new method has vastly improved the sensitivity and speed of data collection over the previous conventional methods and will have tremendous impact on biological and health studies.

Donald G. Fletcher

Physical Science Administrator National Bureau of Standards

Mr. Fletcher is recognized for his outstanding management of a complex technical research project on product and process development of papers, textiles and plastics. The work is conducted under difficult professional conditions requiring superior managerial skills to maintain quality and output as well as employee morale.

Arthur Hockman

Materials Research Engineer National Bureau of Standards

Mr. Hockman is a dominant national force in the advancement of joint sealant technology for buildings. His activities include laboratory research, field studies, lectures, consultations and the preparation of Federal specifications dealing with building joint sealants. Results of his research provide, for example, methods for determining the long-term durability of sealants on the basis of shortterm tests. The methods are used extensively by the entire sealant industry. He has provided personal on-the-scene advice to Federal Agencies and to local governmental units, resulting in large financial savings in their construction and maintenance activities. His work reflects credit on the National Bureau of Standards, the Department of Commerce, and the entire Federal service.

Arnold H. Kahn

Physicist Institute for Materials Research National Bureau of Standards

Dr. Arnold H. Kahn, senior scientist, Solid State Physics Section, is recognized for his valuable contributions to the knowledge and understanding of the electronic energy states and scattering mechanisms in semiconductors and insulators. These contributions have had a major impact on the success of NBS programs in solid state physics over the last dozen years.

E. June Maienthal

Research Chemist National Bureau of Standards

Mrs. Maienthal has achieved outstanding success in providing novel, sensitive and accurate methods for trace and major constituent determinations in the Standard Reference Materials Program through polarographic measurement techniques. These methods have been applied to highly purified metals and a wide variety of commercial alloys and chemical reagents as well as to other agency problems such as the determination of lead in fish flour concentrate, water pollution, and air pollution measurements. Contributions to 212 Standard Reference Materials certificates, hundreds of analytical reports and 15 publications are indicative of Mrs. Maienthal's productivity.

Oscar Menis

Supervisory Chemist National Bureau of Standards

Dr. Menis is being recognized for outstanding scientific leadership in the development within the Analytical Chemistry Division of two new programs of major national significance and for very valuable contributions, both personally and through his Section, to analytical chemistry. His reorientation of Section capabilities has led to important contributions to new, modern techniques of analytical chemistry. He has provided imaginative leadership in the program for standardization of thermal analysis. His highly significant efforts in helping to standardize the field of clinical spectrophotometry will improve markedly the accuracy of this important biomedical diagnostic tool.

Paul E. Pontius

Chief, Mass, Length and Volume Section Optical Physics Division National Bureau of Standards

Mr. Paul Pontius is recognized for his outstanding contribution to the national measurement system by applying modern quality control procedures to precise measurement. His conception and implementation of the Pilot Program for Mass resulted in greatly improved service to the nation by the National Bureau of Standards.

John J. Rush

Chemist National Bureau of Standards

Mr. Rush's ability and drive have resulted in an outstanding publication record which has earned him an international reputation. His colleagues throughout the field of molecular dynamics have been stimulated by his initiative and leadership. Under his guidance and encouragement the material research programs at the National Bureau of Standards have been enriched through the use of neutron scattering as a material probe contributing significantly to the increase in excellence of materials science at NBS.

Louis C. Santone

Operations Research Analyst National Bureau of Standards

Mr. Santone is recognized for outstanding leadership in systems analysis as applied to city operating problems which resulted in the development of a computerbased fire station locator for East Lansing, Michigan. The development of the locator has been so successful to East Lansing that it has led to requests from at least ten other cities for immediate applications of the fire station locator. The International City Managers Association has endorsed this study and considers it to be a significant milestone in the application of systems analysis to the solution of urban problems.

Samuel J. Schneider

Research Chemist National Bureau of Standards

Recognizing the need for improved melting point data for inorganic refractory materials, Mr. Schneider designed and supervised the construction of equipment capable of melting point determinations up to 3000°C under controlled environmental conditions with a precision and accuracy not previously attained. Using this apparatus and a newly perfected technique, he successfully measured the melting point of alumina (2054°C, IPTS 1968) in different atmospheres: vacuum, helium, argon and air, and showed for the first time the environmental dependence of the melting point of this material. In addition Mr. Schneider chaired an international task force to recommend the alumina melting point as a secondary reference and has issued an alumina SRM certified as to melting point.

Robert S. Tipson

Research Chemist National Bureau of Standards

Dr. Tipson is recognized for his highly significant achievements in four areas in which he has performed service of great value to his Division, to the Bureau and to the Nation. These accomplishments are (1) meritorious authorship in synthetic and structural organic chemistry, (2) valuable contributions through expediting an important new program in Clinical

Chemical Standards, (3) outstanding service as consultant for the Surveys and Investigations Staff of the House Appropriations Committee, and (4) demonstrated leadership as co-editor of organic chemical periodicals and as an expert in organic chemical nomenclature.

Esther C. Cassidy

Physicist National Bureau of Standards

Harold N. Cones

Electronic Engineer National Bureau of Standards

Mrs. Cassidy and Mr. Cones are recognized for outstanding research in the use of the "Kerr effect" for pulse voltage measureand electrostatic mapping. They have demonstrated extraordinary experimental skill in developing this relatively new technique to the point where it has been possible to establish a National Bureau of Standards calibration service capable of providing science and industry in this country with a means for greatly improving confidence in the accuracy with which high-voltage pulses a few millionths of a second in duration can be measured. Their research in this field has brought them international recognition.

SUGGESTION AWARD

Francis J. Balint

Chief, Management and Planning Branch Computer Division Administration and Technical Services National Oceanic and Atmospheric Administration

Mr. Balint's suggestion proposed converting government-owned 024 and 026 card punch machines, and 056 verifying machines from 48-character-set equipment to 64-character-set equipment. This will prolong the useful life of government-owned card-punch machines by permitting their use in computer systems of modern, sophisticated design.

